

Jacobs Space Exploration Group (JSEG)

Midwest Aerospace Small Business Industry Day



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Jacobs Space Exploration Group

NASA Marshall Space Flight Center

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JACOBS®

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Company Overview

- Premier global consulting, design, engineering, construction, operations & maintenance and technical services firm
- We provide innovative solutions for a more connected, sustainable world
- Global network of 74,000 employees in more than 400 locations across 40+ countries
- Recently acquired CH2M

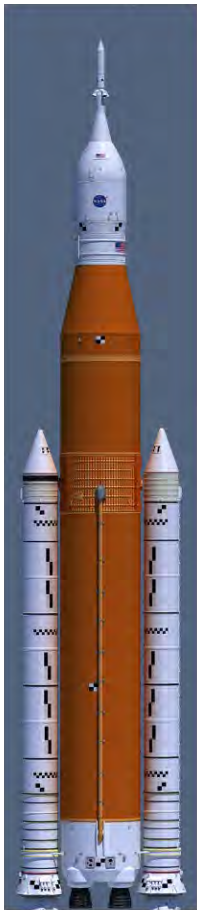
Company Overview

- Organized by Lines of Business
 - Aerospace, Technology, Environmental, and Nuclear
 - Energy, Chemicals and Resources
 - Buildings, Infrastructure, and Advanced Facilities
- Headquartered in Dallas, TX
- Committed to Safety, Innovation, and Sustainable Solutions

Company Overview

- Jacobs Space Exploration Group (JSEG)
 - Supporting NASA Marshall Space Flight Center (MSFC) continuously since 1989
 - Recipient of 2017 Small Business Administration Dwight D. Eisenhower Award for Excellence for Small Business Engagement
 - Awarded the MSFC Engineering Services and Science Capability Augmentation (ESSCA) contract; operations began December 1, 2017

Company Overview



JSEG KEY MISSION AREAS

❖ Space Launch System Program

- Design & development of new heavy lift vehicle
- Systems engineering & integration
- Flight software, testing & integration
- Design, analysis, modeling & simulation, test
- Operation of Systems Integration Lab
- Insight into prime contractor activities



❖ International Space Station

- Environmental Control & Life Support System (ECLSS) sustaining engineering, spares, flight anomaly resolution, software
- Material Science Research Rack operations



❖ Earth & Space Science

- Gamma-ray Burst Monitor instrument operations center support
- James Webb Space Telescope primary mirror segment qualification testing
- Space environments & weather
- IXPE – Imaging X-ray Polarimeter Explorer

Company Overview

EXAMPLES OF JSEG WORK

- ❖ Mechanical & electrical design services
- ❖ Systems engineering & integration
- ❖ Structures & dynamics
- ❖ Electrical engineering & avionics systems development
- ❖ Payload development & integration
- ❖ Materials engineering & manufacturing
- ❖ Propulsion system research & development



24-inch Rocket Motor Test



Gamma Ray Burst



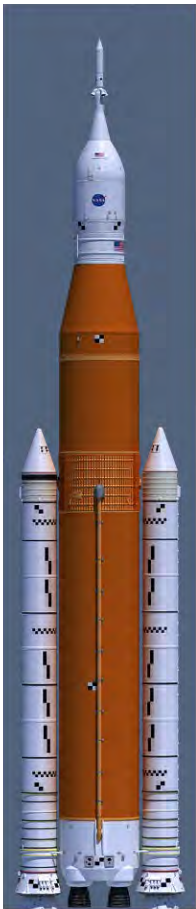
Additive Manufacturing



Thermal Protection
System Spray Booth

Company Overview

Examples of JSEG Work



SLS Solid Rocket Motor Tests



J-2X Injector Test Firing



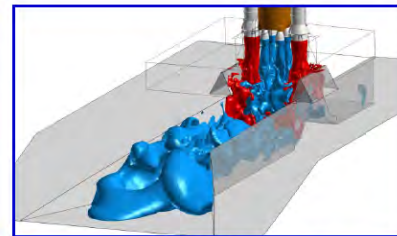
SLS Weld Tensile Tests in MMTF



Engine Section Transporter
for SLS Structural Test Article



ISS ECLSS Bosch
Test Stand Development



Fluids Modeling for
SLS Environments

Tips for Success

- Get to know us and the services we provide
- Know who our customers are
- Learn what is important to the prime
 - Excellent cost control
 - Proven past performance
 - Robust financial management system
 - Flexibility and responsiveness